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Evaluating financial performance of insurance companies using rating transition matrices

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ABSTRACT

Financial performance of insurance companies is captured by changes in rating grades. An insurer is susceptible to a rating transition which is a signal depicting current financial conditions. We employ Rating Transition Matrices (RTM) to analyse these transitions. Within this context, credit quality can either improve, remain stable or deteriorate as reflected by a rating upgrade or downgrade. We investigate rating trends and forecast rating transitions for UK insurers. We also provide insights into the effects of the global financial crisis on financial performance of UK insurance companies, as reflected by rating changes. Our analysis shows a significant degree of rating changes, as reflected by rating fluctuations in rating matrices. We conclude that insurers with higher (better) rating grades depict rating stability over the long-run. An unexpected but interested finding shows that insurers with good rating grades are nevertheless susceptible to rating fluctuations. General insurers are more likely to be rated and they demonstrate higher levels of rating grade variations over the period studied. Using comparative rating transition matrices, we find more variations in rating movements in the post-financial crisis period. We also conclude that general insurers reflect less stable rating outlooks compared to life and general insurers.

1. Introduction

The insurance industry is one of the key players in the financial services sector in almost all developed and developing nations. It contributes to economic growth, efficient resource allocation, reduction of transaction costs, creation of liquidity, facilitation of the economies of scale in investment, and the spread of financial losses (Doumpos, Gaganis, & Pasiouras, 2012; Haiss & Sümegi, 2008; Malik, 2011; Sambasivam & Ayele, 2013). Life insurers also contribute towards investment by providing the means to create personal savings through life and pension contracts (Carter & Falush, 2009).

The performance of insurance companies not only contributes towards improving the market value of individual firms but also towards industrial growth. It ultimately contributes to overall growth and prosperity of the economy. This subject has attracted much attention, comment and interest from various parties such as regulators, financial experts, researchers, management of business entities and the general public (Omondi & Muturi, 2013). Mehari and Aemiro (2013) summarise that evaluating the determinants of insurers' performance has become an important research theme within the corporate finance literature. Due to its importance, a comprehensive method should be employed to measure the financial performance of insurance companies and to identify the factors that influence their

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performances (Cekrezi, 2015).

Despite its significant contributions to the economy, the insurance industry has been misunderstood within society. Wűrmli (2011) points out that the insurance community has failed to persuade the public of its importance to the society and that regulators have failed to perform regulations properly. In this instance, the insurer's knowledge and expertise are not adequately recognised by the society. Unlike the banking institutions, the insurance industry is less transparent and less informative in terms of educating the public about their mechanism, precise method of operations and contributions to the society.

Cases of insurance companies' failures in recent years and the increasingly challenging financial environment have raised further concerns about the financial performance of insurance industry to its stakeholders. In addition, the recent global financial crisis has affected the financial stability of the financial service providers such as banks and insurance companies in the United Kingdom (UK) (Boyle, 2013). Choi (2013) highlights that due to a severe liquidity freeze, many financial institutions had failed and their failures created more uncertainty about the future for financial market and economic recovery. Information asymmetry during the financial crisis could also influence economic stability of a nation, triggered by conflict of interests between the financial service providers and the regulatory body (Tamegawa, 2016).

Pottier and Sommer (1999) argue that the academic literature on the determinants of insurer's financial performance is limited. The same argument is raised in many other scholars' researches (Burca & Batrinca, 2014; Florez-Lopez, 2007). There is indeed an ultimate difference between assessing insurance companies and other corporations (Florez-Lopez, 2007; Yakob, Yusop, Radam, & Ismail, 2012). Despite the various definitions, interpretations and measurements of financial performance, there is no ultimate consensus on the best way to measure performance and to identify the factors that affect financial performance (Liargovas & Skandalis, 2010 and Omondi & Muturi, 2013).

The financial performance of insurance companies could be reflected by the changes in the rating grades. Rating changes become the signal to depict the current financial condition of a company (Hadad, Santoso, Santoso, Besar, & Rulina, 2009). Many studies have employed Rating Transition Matrices (RTM) to depict rating transitions (migration or movement to another rating grade). These matrices have been used extensively to study rating performance on large financial corporations and banks (Stefanescu, Tunaru, & Turnbull, 2009 and Shao, Li, & Li, 2016), corporate bond performance (Hadad et al., 2009), sovereign credit ratings (Hill, Brooks, & Faff, 2010), consumer loans (Malik & Thomas, 2012) and government bonds (Tamegawa, 2016). Wang (2010) evaluates rating transitions for US insurance companies and establishes that insurer rating changes differ across economic and industry cycles. The rating grades represent an overall assessment of an insurer's creditworthiness (Frydman & Schuermann, 2008). These ratings, together with the financial and non-financial information obtained during the rating process can become a powerful tool to assist decision-making for the stakeholders. However, the rating process is not totally transparent, and their analysis and determinants are not available to the public. Thus, it becomes a constraint for stakeholders to analyse and use the rating information (Estrella, Park, & Peristiani, 2000).

Insurer ratings are extensively used to evaluate insurers' financial strength and insolvency risk (Wang & Carson, 2014). However, previous studies have mainly focused on insurers in the United States (US) (Doherty, Kartasheva, & Phillips, 2012, Kartasheva & Park, 2012 and Chen & Pottier, 2016). Thus, this study attempts to address this issue by investigating the rating performance of non-US insurance companies. The analysis is based on the widely-used Markov theory, but its application is focused on the UK insurance industry.

The global financial crisis (2007–2009) resulted in an uneven impact on the insurers. Some insurers are severely affected by the crisis while some others remain steadfast (Baluch, Mutenga, & Parsons, 2011; Eling & Schmeiser, 2010). Within the insurance industry itself, insurers' assets and liabilities or their balance sheets have been significantly affected by the recent financial crisis. Schich (2009) argues that during the crises, insurers experience face valuation pressure which is caused by assets that are mostly held in bonds and stocks. The UK insurance industry is also affected by the crisis as reflected by the decline of insurance density and insurance penetration levels. Insurance density (ID) is an indicator to measure individuals spending on insurance products. Insurance penetration (IP) measures the importance of insurance activities relative to the size of the economy. Higher ID and IP values indicate better quality of insurance business. This study seeks to highlight the effect of the financial crisis as shown in the rating grades' changes by utilising comparative analyses.

In summary, the aim of this study is to evaluate financial performance (FP) of UK insurance companies by analysing their rating performance. It attempts to investigate rating trends and forecast rating movements through the application of rating transition matrices. This study extends previous research by comparing the financial performance between two different periods, namely the pre-financial crisis period and the post-financial crisis period.

This paper is organized as follows. Section "Empirical Strategy" describes our data selection, research methodology and its theoretical basis. Section "Findings and Discussions" evaluates and compares insurers' rating by developing the matrices. This section focus on evaluating noticeable trends from the matrices and the impact of the financial crises on insurers' ratings performance. The limitations of this study and our recommendations are included in the final section.

2. Empirical strategy

There are many external credit rating agencies in the market such as A.M Best (Best), Standard & Poor, Moody's and Fitch. Each rating agency has their sets of standards and methodologies in the rating analysis. However, Trueck and Rachev (2009) state that these variations are tolerable and acceptable, even by the regulatory bodies. In this study, the selection of a rating agency is influenced by factors such as financial constraint, data availability, accessibility and research requirements. After deliberating all available options, the A.M Best rating agency has been selected for this study. The decision to select the A.M Best database is also influenced by its credentials